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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,481	01/09/2002	Guy Marck	08130.0076	6445

7590

10/01/2003

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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 10/01/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,481

Applicant(s)

MARCK, GUY

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

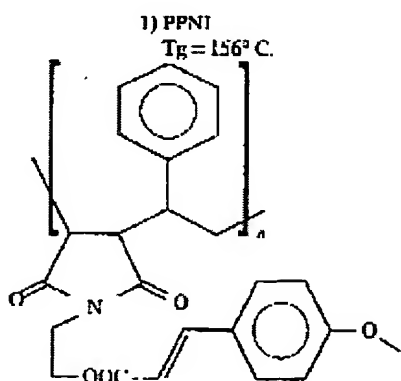
Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

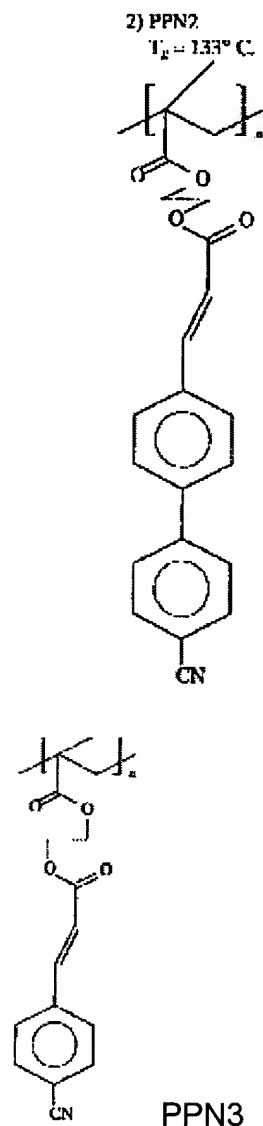
DETAILED ACTION

1. Applicants' amendments and comments have overcome rejections under 35 USC 112, second paragraph, and such rejections are, therefore, withdrawn.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-7, 10, 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schadt et al (U.S. 5,602,661), as per reasons of record.

Schadt discloses an optical component includes an anisotropic layer of cross-linked liquid crystal monomers with varying local orientation of the liquid crystal molecules. The liquid crystal layer is in contact with an orientation layer comprising a photo-orientable polymer network (PPN). A method of making includes orienting the liquid crystal monomers by the interaction with the PPN layer and subsequently fixing the molecules by cross-linking (abstract). Suitable PPNs are described by generic formulas PPN1, PPN2 and PPN3 in col. 2 and 3:



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The generic formula (I) presented in the instant claim 1 that allows a wide variety of permutations for all groups, for example A is carbon or substituted carbon, , M is a repeating monomer unit, such as ones presented by -- []---_n of Schad, one or more of n₁, n₂, n₃ or n₄ is zero, P₁-P₃ are photoactive groups, denoted as aromatics or maleimide derivatives as seen in Schad, B₁-B₄ are spacer groups, which can bge anything from the single bond to any compounds, as allowed by permutations described

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in the instant claim 1 (note that n_4 and n_5 can be independently zero). (page 70, lines 1-5).

Therefore, a person skilled in the art would have found the obvious analogy between generic formulas of the instant claims under certain permutations in light of more specifically described compounds of Schad.

Allowable Subject Matter

4. Claims 12 and 13 are allowable over the prior art of record.

No prior art of record discloses or suggests specific compounds identified by the instant claims 12 and 13.

Response to Arguments

5. Applicant's arguments filed July 31, 2003 have been fully considered but they are not persuasive. The crux of Applicants' arguments appears to hinge on the structures PPN1, PPN2 and PPN3 that allegedly have the linear structure compared to the branched structure of the claimed polymers, and that the polymers of Schad do not have at least two photoactive groups.

In response to this, Applicants attention is called to a polymer denotes as PPN1, wherein the repeating monomer unit M, (in the examples the double bond is already broken), has two photoactive substitute groups attached to it, and taking into consideration an enormous breadth of claimed compounds and myriads of permutations

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allowed by Applicants, a person skilled in the art would have found Applicants' genus obvious over Schad's disclosed species.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (703) 308-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 305-2450. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

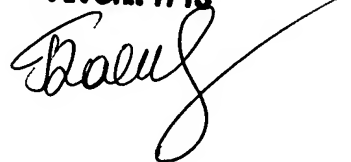
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

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Tatyana Zalukaeva, Ph.D.
Primary Examiner
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A handwritten signature in black ink, appearing to read 'Tatyana', with a long, sweeping horizontal line extending to the right.

September 22, 2003